ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: Date Received: CB330001

01/04/12 Project: Landau Associates

Date Extracted: Date Analyzed:

01/05/12 01/05/12

ug/L (ppb)

Water

Client:

Lab ID: Data File: $1198001.010.011\ 1Q12\ SW\ Sampling$ 201016-01

Instrument:

201016-01.022 ICPMS1

Operator:

 \mathbf{AP}

Internal Standard: Germanium

% Recovery: 97

Lower Limit: 60

Upper Limit: 125

Concentration

ug/L (ppb)

Copper

Analyte:

Matrix:

Units:

13.2

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:

CB331707

Date Received:

01/04/12

Date Extracted: Date Analyzed:

Matrix: Units:

 $01/05/12 \\ 01/05/12$

Water ug/L (ppb)

Client:

Landau Associates

Project:

1198001.010.011 1Q12 SW Sampling 201016-02

Lab ID: Data File:

201016-02.023

Instrument: Operator:

ICPMS1 AP

 \mathbf{Lower}

Upper Limit:

Germanium

 $Internal\ Standard:$

% Recovery:

102

Limit: 60

Limit 125

Concentration ug/L (ppb)

Analyte:

Copper Zinc 194 1,080

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:

Method Blank

Date Received:

Date Extracted:

Not Applicable 01/05/12

Date Analyzed: Matrix: Units:

01/05/12 Water

ug/L (ppb)

Client:

Landau Associates

Project:

1198001.010.011 1Q12 SW Sampling I2-13 mb

Lab ID: Data File: Instrument:

I2-13 mb.015 ICPMS1

Operator:

AP

Lower

Upper

Internal Standard: Germanium

% Recovery:

Limit: 60

Limit: 125

Concentrationug/L (ppb)

97

Analyte:

Copper Zinc

<1 <1

ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/12 Date Received: 01/04/12

Project: 1198001.010.011 1Q12 SW Sampling, F&BI 201016

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201019-01 (Matrix Spike)

				Percent	Percent			
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD	
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)	
Copper	ug/L (ppb)	20	473	10 b	143 b	50-144	174 b	
Zinc	ug/L (ppb)	50	644	29 b	100 b	46-148	110 b	

Laboratory Code: Laboratory Control Sample

	Percent					
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Copper	ug/L (ppb)	20	101	66-134		
Zinc	ug/L (ppb)	50	101	57-135		

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Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

□ Tacoma	Edmonds (425) 778-0907 (253) 926-2493 (509) 327-9737	Please Bi	11 Alaskan Coppen	ML 1/4/12 A1 2	
ASSOCIATES Spokane	(503) 542-1080	r. U. P	₹08172 stody Record	Page of of	
Project Name Alastan (Project Location/Event 181 Sampler's Name Rosen Project Contact (Ferry The Send Results To Gerry The Sample I.D.	2 SW Sampline any Trimmer ompson, Joekalme	ar, Gary Ituiting a	Testing Parame	Turnaround Time Standard Accelerated Observations/Comments	
C\$33 1707	14/2011:15 /12			_X_ Allow water samples to settle, collect aliquot from clear portion _X_NWTPH-Dx - run acid wash/silica gel cleanup	
				run samples standardized toproduct	
				Analyze for EPH if no specific product identified VOC/BTEX/VPH (soll):	
				non-preservedpreserved w/methanolpreserved w/sodium bisulfateFreeze upon receipt	
10 10 10 10 10 10 10 10 10 10 10 10 10 1				Dissolved metal water samples field filtered Other	
				received at 4_oc	
Special Shipment/Handling or Storage Requirements 0	n ice	1 1 1	M	lethod of delivered to lab	
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Printed Name	Printed Name	an	Printed Name	Printed Name	

Date 11 4 2012 Time 13:30

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Time

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 12, 2012

Joe Kalmer, Project Manager Landau Associates 130 2nd Ave. S. Edmonds, WA 98020

Dear Mr. Kalmer:

Included are the results from the testing of material submitted on January 4, 2012 from the 1198001.010.011 1Q12 SW Sampling, F&BI 201016 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: Gerald Thompson, Gary Huitsing, Rosemary Trimmer NAA0112R.DOC